APRIL/MAY 2023

BEL53/UEL53/CEL53 — ELECTRICAL AND ELECTRONIC INSTRUMENTATION

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define Precession.
2. What are the errors in measurement?
3. Write the purpose of AC and DC Bridge.
4. Define the term Frequency.
5. List out the oscilloscope accessories.
6. Define the term electron gun.
7. Define the term negative feedback.
8. Define wave analyzer.
9. Designate the gauge factor.
10. Draw the seven segment display for 3 and 8.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Give a Brief account on conversion of galvanometer into ammeter.

Or

(b) Short note on-shunt type ohm meter.

12. (a) Elucidate the Kelvin's bridge.

Or

(b) Discuss the Maxwell's capacitance Bridge.

13. (a) Give a short on deflection sensitivity.

Or

(b) Discuss the sampling specification of an oscilloscope.

14. (a) Give a short note on working principle of digital Voltmeter.

Or

(b) Discuss the working function of basic wave analyzer.

15. (a) Discuss the recording head with neat sketch.

Or

(b) Give a short note on of resistance thermometer.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain in detail PMCC galvanometer with neat diagram.

17. Discuss wheatstone bridge.

18. Discuss in detail digital storage oscilloscope.

19. Explain the working principles of digital voltmeter.

20. Discuss the necessary theory of unbounded strain gauge transducer.

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